

Notice of Allowability

Application No.

10/815,329

Examiner

Sajous Wesner

Applicant(s)

DOROJEVETS ET AL.

Art Unit

2628

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the response dated 6/26/06.
2. ☒ The allowed claim(s) is/are 1-31.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date <u>4/12/06</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

This communication is responsive to the amendment and response dated June 26, 2006. Claims 1-31 are presented for examination.

Allowable Subject Matter

1. Claims 1-31, after further reconsideration and search, are allowed over the prior art.

Reasons for Allowance

2. The following is an examiner's statement of reasons for allowance:

The present invention is directed to the field of video processing using parallel vector processing.

The conventional art, namely Miller (USPN 6847365) discloses a media processing system that processes elements connected together in parallel, including a system for sharing DRAM between a processor and a decoder and a system for producing full motion video. However, Miller does not teach configuring a plurality of processing elements into a two-dimensional array of processing elements. Miller, at fig. 3 shows processing elements arranged in a one-dimensional row and not in a two-dimensional array. In addition, Miller also does not teach a plurality of block registers included in each processing element.

Matsuura (USPN 4725973) teaches a vector processor for executing vector instructions which comprises a plurality of vector registers and a plurality of pipeline

Art Unit: 2628

arithmetic logic units (see Abstract). Matsuura also teaches two element series are simultaneously read from the vector register array and are concurrently processed by two arithmetic logic units (see col. 3, lines 19-21). However, Matsuura does not teach a plurality of block registers included in each processing element and configuring a plurality of processing elements into a two-dimensional array of processing elements. Thus, neither Miller, Matsuura nor their combination teach a plurality of block registers included in each processing element and configuring a plurality of processing elements into a two-dimensional array of processing elements such that each processing element includes a plurality of vector registers, a plurality of block registers, a plurality of scalar registers, and a plurality of arithmetic logic units, wherein a data path of each processing element includes a set of processing element slices each coupled to one arithmetic logic unit such that each arithmetic logic unit receives a specified portion of each vector register as input, configuring a video stream into data blocks, loading the data blocks into the plurality of vector registers within each processing element, reading the specified portions of each vector register by each of the corresponding arithmetic logic units within all processing elements simultaneously and processing the read portions by the arithmetic logic units such that the data blocks from the plurality of vector registers are processed in parallel. For the aforementioned reasons, the limitations of claims 1-31 are allowed over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably


accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sajous Wesner whose telephone number is 571-272-7791. The examiner can normally be reached on M-F 9:15-6:45.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 571-272-7664. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Sajous Wesner
Primary Examiner
Art Unit 2628

WS
12/5/06